IN THE CLAIMS

Please amend the claims as follows:

Claims 1-22 (Canceled).

Claim 23 (Currently Amended): A method of creating an electrically conducting bonding between a face of a first semiconductor element and a face of a ~~semiconductor~~ SiC film included in a second semiconductor element by heat treatment, comprising:

depositing at least one layer directly on the face of the first semiconductor element, each material chosen for each layer being either a semiconductor material or ~~a metallic material~~ tungsten;

depositing at least one layer directly on the face of the ~~semiconductor~~ SiC film, each material chosen for each layer being either a semiconductor material or ~~a metallic material~~ tungsten, wherein at least one of the layers deposited on the first semiconductor element and on the ~~semiconductor~~ SiC film is of ~~a metallic material~~ tungsten;

applying the faces one against the other, with interposing of the deposited layers; and

carrying out a heat treatment at a temperature of or greater than 650°C for combining the deposited layers to form one layer that provides an electrically conducting bonding between the two faces, no insulator layer being interposed between the two faces such that the ~~semiconductor~~ SiC film is not electrically insulated from the first semiconductor element;

wherein the at least one layer deposited onto the face of the first semiconductor element and the at least one layer deposited onto the face of the ~~semiconductor~~ SiC film are chosen to react in a solid phase during the heat treatment and to form a temperature stable mixture with respect to the first and the second semiconductor elements, the heat treatment not inducing any reaction product between the deposited materials and the ~~semiconductor~~ SiC film.

Claim 24 (Previously Presented): A method according to Claim 23, wherein the first and second semiconductor elements are pressed one against the other during the heat treatment.

Claim 25 (Currently Amended): A method according to Claim 23, wherein the first semiconductor element is SiC ~~and the second semiconductor element is SiC~~, the interposed layers comprising a layer of tungsten and a layer of silicon on the face of the first semiconductor element and a layer of tungsten and a layer of silicon on the face of the second semiconductor element, the mixture formed after the heat treatment comprising WSi_2.

Claim 26 (Currently Amended): A method according to Claim 23, further comprising a preliminary defining of the ~~semiconductor~~ SiC film as a superficial layer of the second semiconductor element so as to be ~~configured to be detached~~ detachable therefrom.

Claim 27 (Currently Amended): A method according to Claim 26, wherein ~~further comprising, during~~ the preliminary defining[[,]] comprises a forming of the second semiconductor element by stacking a support, a sacrificial layer, and the ~~semiconductor~~ SiC film, detachment of the ~~thin~~ SiC film from the rest of the substrate being obtained after creation of the bonding, by dissolution of the sacrificial layer.

Claim 28 (Currently Amended): A method according to Claim 26, wherein the preliminary defining comprises an ionic implantation through the face of the second semiconductor element for forming microcavities ~~therein~~ within so as to define the ~~semiconductor~~ SiC film between the microcavities and the implanted face of the second

semiconductor element, detachment of the ~~semiconductor~~ SiC film from the rest of the second semiconductor element being consecutive to the bonding heat treatment or to a specific heat treatment or to the application of mechanical forces or to the combination of a heat treatment and the application of mechanical forces.

Claim 29 (Currently Amended): A method of creating an electrically conducting bonding between a face of a first semiconductor element and a face of a second semiconductor element by heat treatment, at least one of the faces of the first and the second elements to be bonded being of SiC, the method comprising:

depositing at least one layer directly on the face of the first semiconductor element, each material chosen for each layer being either a semiconductor material or ~~a metallic material~~ tungsten;

depositing at least one layer directly on the face of the second semiconductor element, each material chosen for each layer being either a semiconductor material or ~~a metallic material~~ tungsten, wherein at least one layer deposited on the first and second semiconductor elements being of ~~a metallic material~~ tungsten;

applying the faces one against the other, with interposing of the layers of deposited material; and

carrying out a heat treatment at a temperature of or greater than 650°C for combining the deposited layers to form one layer that provides an electrically conducting bonding between the two faces, no insulator layer being interposed between the two faces such that the second semiconductor element is not electrically insulated from the first semiconductor element;

wherein the at least one layer deposited onto the face of the first semiconductor element and the at least one layer deposited onto the face of the second semiconductor

element are chosen to react in a solid phase during the heat treatment and to form a temperature stable mixture with respect to the first and the second semiconductor elements, the heat treatment not inducing any reaction product between the deposited materials and at least one of the semiconductor elements, and

wherein one of the layers is deposited with an excess thickness such that a part of this layer, in contact with another of the deposited layers, combines with the another deposited layer to form the stable mixture, the another layer deposited with an excess thickness, in contact with the semiconductor element on which it is deposited, reacting during the heat treatment with the semiconductor element to form a film with ohmic contact.

Claim 30 (Previously Presented): A method according to Claim 29, wherein the first semiconductor element is SiC and the second semiconductor element is SiC, the interposed layers comprising a layer of tungsten and a layer of silicon on said face of the first semiconductor element and a layer of tungsten and a layer of silicon on the face of the second semiconductor element, the ratio of total thickness of the Si layers to total thickness of the W layers is below 2.5, the mixture formed after the heat treatment comprising WSi_2.

Claim 31 (Currently Amended): A method of creating an electrically conducting bonding between a face of a first semiconductor element and a face of a ~~semiconductor~~ SiC film included in a second semiconductor element by heat treatment, comprising:

depositing at least one layer directly on the face of the first semiconductor element, each material chosen for each conductive layer being either a semiconductor material or ~~a metallic material~~ tungsten;

depositing at least one layer directly on the face of the ~~semiconductor~~ SiC film, each material chosen for each layer being either a semiconductor material or ~~a metallic material~~

tungsten, wherein at least one layer deposited on the first semiconductor element or on the ~~semiconductor~~ SiC film being of ~~a metallic material~~ tungsten;

forming at least one thin oxide layer onto at least one of the deposited layers with a thickness of a few angstroms;

applying the two faces one against the other, with interposing of the layers of deposited material and the at least one thin oxide layer; and

carrying out a heat treatment at a temperature of or greater than 650°C for combining the deposited layers to form one layer that provides an electrically conducting bonding between the two faces, wherein the at least one thin oxide layer is interposed between the two faces;

wherein the at least two layers deposited onto the faces of the first and second semiconductor elements are chosen to react in a solid phase during the heat treatment and to form a temperature stable mixture with respect to the first and the second semiconductor elements, the heat treatment not inducing any reaction product between the deposited materials and at least one of the semiconductor elements, and the oxide of the at least one thin oxide layer is chosen to react with at least one material of the layers, and

wherein the thickness of the at least one thin oxide layer and the thickness of the layer with which the oxide reacts are chosen such that the oxide formed is in a form of isolated precipitates that do not substantially harm the electrically conducting bonding.